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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Noriyoshi Kuroyanagi

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EXAMINER

CORRIELUS, JEAN B

ART UNIT

PAPER NUMBER

2637

DATE MAILED: 03/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/856,005

Applicant(s)

KUROYANAGI ET AL.

Examiner

Jean B. Corielus

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 7-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 January 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

1. The amendment filed 1/12/06 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the description of fig. 11 add new matter to the disclosure because the structural description of fig. 11 is not supported by the original disclosure. More specifically the original disclosure does not support the description of a first second and third code generators in combination with the various components recited of fig. 11. In addition, the addition of component (A) in fig. 2 (b) is not supported by the original disclosure because it fails to support the incorporation of element "A". The original disclosure does not support "AS-MEM" connected to "TS-MEM" and "SC".

Applicant is required to cancel the new matter in the reply to this Office Action.

### ***Drawings***

2. The drawings were received on 1/12/06. These drawings have been approved partially. Fig 2 has not been approved because the original disclosure does not support "AS-MEM" connected to "TS-MEM" and "SC". Fig. 2b has not been approved because of the introduction of element "A" that introduces new matter into the disclosure. In addition, the newly added fig. 11 introduces new matter into the disclosure because the structural view of fig. 11 is not supported by the disclosure. The change to fig. 14 has been approved.

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the user **transmitters** and base station **receivers**, the means for preparing binary zero cross correlation zone; the base station receiver comprising the means for producing respective cross correlation function, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

In addition, Fig. 2 should be relabeled as "Fig. 2A" and "Fig. 2B", respectively. The same comment applies equally to "Fig. 12".

Fig. 13, should designated by a labeled such as "Prior art".

The additional elements recited in claim 8, such as means for transmitting, means for producing means for storing, in combination with the elements recited in claim 7, must be shown or the feature canceled from the claim

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

4. Claims 7-13 are objected to because of the following informalities: Claim 7, line 3, "a plurality of" should be inserted before "user"; line 4, "composite" is mistyped as "composit"; line 4, what does it mean by "**zero cross correlation zone** spreading sequences"? line 5, "which are made by making a product code of" should be replaced by "by multiplying respective one of a plurality of "; line 6, after "with", "respective one of a plurality" should be inserted; line 6, what does it mean by "**zero correlation zone** sequences"; shouldn't "spreading" be inserted before sequence, in each occurrence?; line 6 shouldn't "wherein said composite set of ZCCZ spreading sequences" be inserted before "have"? line 7, what "shift position" does the limitation "such a shift position" refer to? lines 7-9, the limitation starting with "for such a shift condition" up to "a value of zero" is awkwardly written; line 11, "both" should be deleted; line 12, what does it mean by "pieces"? line 12, "said composite set" should be inserted after "pieces"; line 12, N and M should be defined; line 15, "which are made" should be deleted; does "**both sides** of said selected sequence" mean at the beginning and end of the "selected sequences"? line 29, "such" should be deleted; line 29, "sent" should be replaced by

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"received"; line 30, shouldn't "**that**" should be replaced by "in which"; line 30, "output" should be replaced by "outputs" so as to be consistent with line 26.

claim 8, line 4, "as well as" should be replaced by "and"; line 4, what does it mean by "an isolated pilot frame? line 7, shouldn't "said" be replaced by "each" and "further" be inserted after "receiver"; line 10, what does it mean by "analyzing sequences"; line 11, because of the presence of "an", "sequences" should be replaced by "sequence"; line 11 shouldn't "one of" be inserted after "respective"; line 12, "mean" should be replaced by "means"; line 13, what does it mean by "analyzing"? line 16, "as well as" should be replaced by "and"; line 16, what does it mean by "an isolated pilot frame? line 22, "a corresponding one of" should be inserted before "said"; line 24, what does it mean by "by analyzing". Is the limitation "means for transmitting data", recited in claim 8, line 4 the same as similar limitation recited in claim 7, line 18? If so the claim 8 should be amended to make use of antecedent in claim 7.

As per claim 9 see comment made to similar limitation recited in claim 7. in addition, line 17, "the" should be inserted before "Hamming"; line 21, "may" should be deleted; line 27, "said" should be deleted.

claim 10, line 6, "out of a" should be replaced by "from said"; line 6, "composite" is mistyped as "comosit"; line 9, "of" should be replaced by "for"; line 10, "such" should be deleted.

claim 12, line 6, "such" should be deleted; line 9, "Hamming" is mistyped as "Humming".

Claim 13, line 3, what does it mean by "one layer.... having three layers"?

Note that any claim whose base claim is objected is likewise objected. Correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 7-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7, line 24, the limitation "said local ZCCZ spreading sequences" lacks of proper antecedent basis. And line 31, the limitation "said  $N_M$  soft outputs" lacks of proper antecedent basis. In addition, claim 7 fails to particularly point out and distinctly claim the invention because the claim uses means plus function limitations, such as "means for producing" and means for selecting", without corresponding disclosure of specific structures or materials that are not well known. The same comment applies to claim 9.

Claim 8, line 15, "said base station transmitter" lack of proper antecedent basis.

Claim 9, line 21, "the block sequences  $N_1$  and  $N_2$ " lacks of proper antecedent basis.

As per claim 10, line 9, "said KPJZCCZ sequences" lacks of proper antecedent basis.

The scope of claims 11 and 12 is unclear. In addition, it is unclear how the limitations recited in both claims 11 and 12 relate to the limitations recited in the base claim 9.

Claim 13, line 4, "said layer operators" lacks of proper antecedent basis.

Note that any claim whose base claim is rejected is likewise rejected.

7. Claims 6-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 6 recites the limitation of "means for selecting both one sequence and its polarity ....". However the specification as filed does not provide support for such limitation as claimed. The specification, at page 17, lines 17-20 only teaches that the spreading circuit prepare in advance spreading sequences and the respective polarity inverted of the sequences to generate an output signal. claim 6 further recites "means for further deciding the most probable one of said local ZCCZ sequences with its most probable polarity as an element signal included in said baseband data symbol sent from said desired user station using maximum likelihood detection technique that a distance between said soft outputs and reference values ....and said reference values" however, the specification as filed does not provide support for such limitation as claimed. As per claim 8, the additional limitations



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recited in claim 8, in combination with the limitations recited in claim 7 are not supported by the original disclosure.

8. An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence(s) of the specification or in an application data sheet by identifying the prior application by application number (37 CFR 1.78(a)(2) and (a)(5)). If the prior application is a non-provisional application, the specific reference must also include the relationship (i.e., continuation, divisional, or continuation-in-part) between the applications except when the reference is to a prior application of a CPA assigned the same application number.

#### ***Specification***

9. The substitute specification filed 1/12/06 has been entered.

#### ***Allowable Subject Matter***

10. Claims 9-13 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action. Note that the claims must be amended, as well , to overcome any objection set forth above.

#### ***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B. Corrielus whose telephone number is 571-272-3020. The examiner can normally be reached on Maxi-Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
JEAN B. CORRIELUS  
PRIMARY EXAMINER  
3-3-06